

CLAIMS

Please amend the Claims as follows:

1. (Currently Amended) A method for reducing scan power consumption when unloading and restoring content of a processor having one or more scan chains, the method comprising the steps of:
partitioning at least one scan chain into a plurality of segments comprising one or more segments of a predetermined length and an offset segment; and
providing enough clocking to scan all bits in the plurality of segments;
keeping track of the predetermined length, an order of the segments, and the offset segment; and
scanning all one of the plurality of segments one segment at a time.
2. (Currently Amended) The method of Claim 1, wherein the ~~plurality of segments comprises~~ one or more segments of a predetermined length comprise segments of equal length~~and an offset segment.~~
3. (Currently Amended) The method of Claim 1[[2]], wherein the offset segment is used to handle variations in length between the one or more scan chains.
4. (Cancelled) The method of Claim 1, wherein the step of scanning one of the plurality of segments at a time comprises the steps of:
providing enough clocking to scan all bits in the one of the plurality of segments; and
keeping track of the predetermined length, an order of the segments, and the offset segment.
5. (Cancelled) The method of Claim 1, further comprising the step of scanning any remaining one or more of the plurality of segments one at a time to complete scanning the at least one scan chain.
6. (Original) The method of Claim 1, further comprising the steps of:

partitioning any remaining one or more of the one or more scan chains into a plurality of segments;
and
scanning the plurality of segments one at a time.

7. (Currently Amended) An apparatus for reducing scan power consumption when unloading and restoring content of a processor having one or more scan chains, the apparatus comprising:
means for partitioning at least one scan chain into a plurality of segments comprising one or more segments of a predetermined length and an offset segment; ~~and~~
means for providing enough clocking to scan all bits in the plurality of segments;
means for keeping track of the predetermined length, an order of the segments, and the offset segment; and
means for scanning all ~~one~~ of the plurality of segments one segment at a time.
8. (Currently Amended) The apparatus of Claim 7, wherein the ~~plurality of segments comprises one or more segments of a predetermined length~~ comprise segments of equal length ~~and an offset segment~~.
9. (Currently Amended) The apparatus of Claim 7[[8]], wherein the offset segment is used to handle variations in length between the one or more scan chains.
10. (Cancelled) The apparatus of Claim 7, wherein the means for scanning one of the plurality of segments at a time comprises:
means for providing enough clocking to scan all bits in the one of the plurality of segments; and
means for keeping track of the predetermined length, an order of the segments, and the offset segment.
11. (Cancelled) The apparatus of Claim 7, further comprising means for scanning any remaining one or more of the plurality of segments one at a time to complete scanning the at least one scan chain.
12. (Original) The apparatus of Claim 7, further comprising:

partitioning any remaining one or more of the one or more scan chains into a plurality of segments;
and
scanning the plurality of segments one at a time.

13. (Currently Amended) A computer program product for reducing scan power consumption when unloading and restoring content of a processor having one or more scan chains, the computer program product having a medium with a computer program embodied thereon, the computer program comprising:

computer program code for partitioning at least one scan chain into a plurality of segments comprising one or more segments of a predetermined length and an offset segment; and
computer program code for providing enough clocking to scan all bits in the plurality of segments;
computer program code for keeping track of the predetermined length, an order of the segments, and the offset segment; and
computer program code for scanning all ~~one~~ of the plurality of segments one segment at a time.

14. (Currently Amended) The computer program product of Claim 13, wherein the ~~plurality of segments comprises one or more segments of a predetermined length~~ comprise segments of equal length and an offset segment.

15. (Currently Amended) The computer program product of Claim 13[[14]], wherein the offset segment is used to handle variations in length between the one or more scan chains.

16. (Canceled) The computer program product of Claim 13, wherein the computer program code for scanning one of the plurality of segments at a time comprises:
computer program code for providing enough clocking to scan all bits in the one of the plurality of segments; and
computer program code for keeping track of the predetermined length, an order of the segments, and the offset segment.

17. (Canceled) The computer program product of Claim 13, the computer program further comprising computer program code for scanning any remaining one or more of the plurality of segments one at a time to complete scanning the at least one scan chain.
18. (Original) The computer program product of Claim 13, the computer program further comprising:
computer program code for partitioning any remaining one or more of the one or more scan chains into a plurality of segments; and
computer program code for scanning the plurality of segments one at a time.
19. (Currently Amended) Scan circuitry for reducing scan power consumption when unloading and restoring content of a processor having one or more scan chains, the scan circuitry comprising:
a scan structure comprising one or more scan chains, wherein at least one of the one or more scan chain is partitioned into a plurality of segments comprising one or more segments of a predetermined length and an offset segment; and
a master controller coupled to the scan structure for providing enough clocking to scan all bits in the plurality of segments, tracking the predetermined length, an order of the segments, and the offset segment, and scanning all one of the plurality of segments one segment at a time.
20. (Original) The scan circuitry of Claim 19, further comprising an off-chip memory coupled to the master controller for storing unloaded content of the processor.
21. (New) The method of Claim 1, further comprising disabling segments not being scanned.
22. (New) The apparatus of Claim 7, further comprising means for disabling segments not being scanned.
23. (New) The computer program product of Claim 13, further comprising computer program code for disabling segments not being scanned.

24. (New) The scan circuitry of Claim 19, further comprising logic configured to disable segments not being scanned.